

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-130404-2

Client Project/Site: GKM - Region 8 (LTM)

For:

Weston Solutions, Inc.

1435 Garrison Street

Suite 100

Lakewood, Colorado 80215

Attn: Jeff Bryniarski



Authorized for release by:

1/9/2017 4:32:23 PM

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

## Method Summary

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SAV

### Protocol References:

EPA = US Environmental Protection Agency

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

## Sample Summary

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-130404-1	ADW-010_100116	Water	10/01/16 09:45	10/03/16 09:59
680-130404-3	ADW-021_100116	Water	10/01/16 08:15	10/03/16 09:59
680-130404-5	ADW-022_093016	Water	09/30/16 08:30	10/03/16 09:59

## Definitions/Glossary

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

### Qualifiers

#### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Case Narrative

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

**Job ID: 680-130404-2**

**Laboratory: TestAmerica Savannah**

### Narrative

#### CASE NARRATIVE

**Client: Weston Solutions, Inc.**

**Project: GKM - Region 8 (LTM)**

**Report Number: 680-130404-2**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

#### RECEIPT

The samples were received on 10/03/2016; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.7 C.

#### DISSOLVED METALS (ICPMS)

Samples ADW-010\_100116 (680-130404-1), ADW-021\_100116 (680-130404-3) and ADW-022\_093016 (680-130404-5) were analyzed for dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/30/2016 and analyzed on 01/04/2017.

Samples have been field filtered with a 10 micron filter.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

## Client Sample Results

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

**Client Sample ID: ADW-010\_100116**

**Date Collected: 10/01/16 09:45**

**Date Received: 10/03/16 09:59**

**Lab Sample ID: 680-130404-1**

**Matrix: Water**

**Method: 200.8 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	90		10	4.6	ug/L	—	12/30/16 15:08	01/04/17 09:19	1

**Client Sample ID: ADW-021\_100116**

**Date Collected: 10/01/16 08:15**

**Date Received: 10/03/16 09:59**

**Lab Sample ID: 680-130404-3**

**Matrix: Water**

**Method: 200.8 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	110		10	4.6	ug/L	—	12/30/16 15:08	01/04/17 08:42	1

**Client Sample ID: ADW-022\_093016**

**Date Collected: 09/30/16 08:30**

**Date Received: 10/03/16 09:59**

**Lab Sample ID: 680-130404-5**

**Matrix: Water**

**Method: 200.8 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	110		10	4.6	ug/L	—	12/30/16 15:08	01/04/17 08:57	1

# QC Sample Results

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

## Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 680-463857/1-A

Matrix: Water

Analysis Batch: 463875

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 463857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum, Dissolved	4.6	U	10	4.6	ug/L	—	12/30/16 15:08	01/04/17 08:34	1

Lab Sample ID: LCS 680-463857/2-A

Matrix: Water

Analysis Batch: 463875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 463857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum, Dissolved	2000	2160		ug/L	—	108	85 - 115

Lab Sample ID: 680-130404-3 MS

Matrix: Water

Analysis Batch: 463875

Client Sample ID: ADW-021\_100116

Prep Type: Dissolved

Prep Batch: 463857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum, Dissolved	110		2000	2230		ug/L	—	106	70 - 130

Lab Sample ID: 680-130404-3 MSD

Matrix: Water

Analysis Batch: 463875

Client Sample ID: ADW-021\_100116

Prep Type: Dissolved

Prep Batch: 463857

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum, Dissolved	110		2000	2130		ug/L	—	101	70 - 130	5	20

Lab Sample ID: 680-130404-5 MS

Matrix: Water

Analysis Batch: 463875

Client Sample ID: ADW-022\_093016

Prep Type: Dissolved

Prep Batch: 463857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum, Dissolved	110		2000	2110		ug/L	—	100	70 - 130

Lab Sample ID: 680-130404-5 MSD

Matrix: Water

Analysis Batch: 463875

Client Sample ID: ADW-022\_093016

Prep Type: Dissolved

Prep Batch: 463857

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum, Dissolved	110		2000	2210		ug/L	—	105	70 - 130	4	20

TestAmerica Savannah

## QC Association Summary

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

### Metals

#### Prep Batch: 463857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130404-1	ADW-010_100116	Dissolved	Water	200	
680-130404-3	ADW-021_100116	Dissolved	Water	200	
680-130404-5	ADW-022_093016	Dissolved	Water	200	
MB 680-463857/1-A	Method Blank	Total/NA	Water	200	
LCS 680-463857/2-A	Lab Control Sample	Total/NA	Water	200	
680-130404-3 MS	ADW-021_100116	Dissolved	Water	200	
680-130404-3 MSD	ADW-021_100116	Dissolved	Water	200	
680-130404-5 MS	ADW-022_093016	Dissolved	Water	200	
680-130404-5 MSD	ADW-022_093016	Dissolved	Water	200	

#### Analysis Batch: 463875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130404-1	ADW-010_100116	Dissolved	Water	200.8	463857
680-130404-3	ADW-021_100116	Dissolved	Water	200.8	463857
680-130404-5	ADW-022_093016	Dissolved	Water	200.8	463857
MB 680-463857/1-A	Method Blank	Total/NA	Water	200.8	463857
LCS 680-463857/2-A	Lab Control Sample	Total/NA	Water	200.8	463857
680-130404-3 MS	ADW-021_100116	Dissolved	Water	200.8	463857
680-130404-3 MSD	ADW-021_100116	Dissolved	Water	200.8	463857
680-130404-5 MS	ADW-022_093016	Dissolved	Water	200.8	463857
680-130404-5 MSD	ADW-022_093016	Dissolved	Water	200.8	463857



# Lab Chronicle

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

**Client Sample ID: ADW-010\_100116**

**Date Collected: 10/01/16 09:45**

**Date Received: 10/03/16 09:59**

**Lab Sample ID: 680-130404-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	200			50 mL	50 mL	463857	12/30/16 15:08	AJR	TAL SAV
Dissolved	Analysis	200.8		1			463875	01/04/17 09:19	BWR	TAL SAV
Instrument ID: ICPMSC										

**Client Sample ID: ADW-021\_100116**

**Date Collected: 10/01/16 08:15**

**Date Received: 10/03/16 09:59**

**Lab Sample ID: 680-130404-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	200			50 mL	50 mL	463857	12/30/16 15:08	AJR	TAL SAV
Dissolved	Analysis	200.8		1			463875	01/04/17 08:42	BWR	TAL SAV
Instrument ID: ICPMSC										

**Client Sample ID: ADW-022\_093016**

**Date Collected: 09/30/16 08:30**

**Date Received: 10/03/16 09:59**

**Lab Sample ID: 680-130404-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	200			50 mL	50 mL	463857	12/30/16 15:08	AJR	TAL SAV
Dissolved	Analysis	200.8		1			463875	01/04/17 08:57	BWR	TAL SAV
Instrument ID: ICPMSC										

## Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

## Login Sample Receipt Checklist

Client: Weston Solutions, Inc.

Job Number: 680-130404-2

**Login Number: 130404**

**List Source: TestAmerica Savannah**

**List Number: 1**

**Creator: Banda, Christy S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Certification Summary

Client: Weston Solutions, Inc.  
Project/Site: GKM - Region 8 (LTM)

TestAmerica Job ID: 680-130404-2

## Laboratory: TestAmerica Savannah

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Colorado	State Program	8	N/A	12-31-17

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